

Multi-Functional Power Source

Abstract of the Disclosure

A multi-functional power source includes a generator and an engine arrangement to drive a crankshaft to rotate. The generator includes a generator housing, a
5 rotor which couples with the crankshaft and includes a magnetic element coaxially and rotatably disposed within the generator housing and defining a magnetic cavity within the magnetic element, and a coil assembly coaxially disposed within the magnetic cavity such that when the magnetic element of the rotor is driven to rotate, the coil assembly is adapted for producing the induced electric power. An output axle, having an output end,
10 is integrally extended from the crankshaft to a position out of the generator housing such that when the crankshaft drives the output axle to rotate, the output end of the output axle is adapted for producing an external mechanical power simultaneously when the generator produces the induced electric power.